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a means connected to the control device is provided which is triggered by a ~~forward edge of an article to be welded entering, or the rear edge of an article exiting,~~ ^{the deflection of at least one of the} ~~between the welding electrode rollers; and~~ ^{welding rollers caused by the article passing between the electrode rollers;}

wherein the control device is configured to receive from the means a signal indicating the edge of the article to be welded has entered between the electrode rollers and in dependence thereon to deliver to the switch arrangement a signal releasing the welding current to the electrode rollers; and

wherein the control device is configured to receive from the means a signal indicating the edge of the article to be welded has exited between the electrode rollers and in dependence thereon to deliver to the switch arrangement a signal to discontinue the welding current to the electrode rollers.--

cancel --12. (Once Amended) A welding apparatus according to Claim 11, characterized in that the means is configured to detect the deflection of at least one of the welding electrode rollers by the article passing between the electrodes.--

Twice --13. (Once Amended) A welding apparatus according to Claim 12, characterized in that the means for detecting the deflection comprises a setting arrangement by means of which the response to the position of the leading edge of the article to be welded is adaptable to the thickness of the article.--

No Change --14. (Once Amended) A welding apparatus according to Claim 13, characterized in that the setting arrangement has a disk with a plurality of regions of different thickness in a predetermined proportion to the thickness of the articles to be welded.--

No Change --15. (Once Amended) A welding apparatus according to Claim 14, characterized in that the disk is rotatably arranged, and the regions are recesses of different depth in the disk which are preferably each marked with the corresponding thickness of the article to be welded.--

Support:
Pg 4 lines 13-15
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Pg 8 line 4-
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clm 5 3+12

the deflection of at least one of the welding rollers caused by the article passing between the electrode rollers; and

17. The method of claim 16, wherein the step of determining the presence of the sheet metal article between the electrode rollers includes determining the position of one or both of a leading edge or a trailing edge of the article to be welded;

wherein the welding current is provided to the electrode rollers when it is determined that the leading edge of the article is positioned between the welding electrodes.

18. The method of claim 17, wherein the step of determining the presence of the sheet metal article between the electrode rollers includes sensing the movement of one of the electrode rollers, wherein when one of the rollers is moved a predetermined distance, the welding current is provided to the electrode rollers.

19. An apparatus for welding sheet metal articles, comprising:

at least two electrode rollers;

a welding current source;

a controllable switch arrangement for selectively providing welding current from the welding current source to the at least two electrodes; and

a switch means for signaling the presence of one of the sheet metal articles between the electrode rollers, wherein the switch means has a first signal output when one of the sheet metal articles is disposed between the electrode rollers, and a second signal output when none of the sheet metal articles are disposed between the electrodes;

wherein the switch means changes from the second signal output to the first signal output when an edge of the sheet metal article is disposed between the electrode rollers.

is triggered by the deflection of at least one of the electrode rollers by the article passing between the rollers, and the switch means

Same support as for Clm 11

20. The apparatus of claim 19, wherein the switch means includes a pivotally mounted arm for mounting one of the at least two electrode rollers, wherein inserting the edge of the sheet metal article to be welded causes the arm and mounted roller to pivot away from another of the at least two electrode rollers.

NO
Change

21

NO change

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New
Cln

22. An apparatus as in claim 11 wherein the control device switches the welding current to the electrode rollers only when the voltage/current is passing through zero.

Support
Pg 6 line 11-12
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Cln 4

New

23. An apparatus as in claim 19 wherein the switch means switches the welding current to the electrode rollers only when ~~the~~ the voltage/current is passing through zero.